

Claim Amendments:

1. (*currently amended*) An isolated and purified nucleic acid molecule that encodes protease D-G protein, said nucleic acid molecule comprising a member selected from a group consisting of:

(a) a nucleic acid molecule encoding a protein having at least a 70% identity to a polypeptide comprising amino acids 1 to 435 encoded by SEQ ID NO:2;

(b) a nucleic acid molecule encoding a protein having at least a 70% identity to a polypeptide comprising amino acids 1 to 292 encoded by SEQ ID NO:9;

~~(b)~~(c) a nucleic acid molecule which is complementary to either one of the polynucleotides (a) or (b);

~~(e)~~(d) a nucleic acid molecule comprising at least 15 sequential bases of either one of the polynucleotides (a), (b), or (c); and

~~(d)~~(e) a nucleic acid molecule that hybridizes under stringent conditions to either one of the polynucleotide molecules of (a) or (b).

2. (*original*) The nucleic acid molecule of claim 1 wherein the polynucleotide is RNA.

3. (*original*) The nucleic acid molecule of claim 1 wherein the polynucleotide is DNA.

4. (*original*) The isolated and purified nucleic acid molecule of claim 1, having a nucleotide sequence selected from a group consisting of: (SEQ.ID.NO.:1), (SEQ.ID.NO.:8) and functional derivatives thereof.

5. (*original*) The isolated and purified nucleic acid molecule of claim 1, wherein said nucleic acid molecule is genomic DNA.

6. (*original*) An expression vector for expression of a protease D-G protein in a recombinant host, wherein said vector contains a nucleic acid sequence encoding proteolytically active protease D-G protein and functional derivatives thereof.

7. *(original)* The expression vector of claim 6, wherein the expression vector contains a nucleic acid molecule encoding protease D-G protein, having a nucleotide sequence selected from a group consisting of: (SEQ.ID.NO.:1); (SEQ.ID.NO.:8); and functional derivatives thereof.

8. *(original)* The expression vector of claim 6, wherein the expression vector contains genomic DNA encoding protease D-G protein.

9. *(original)* A recombinant host cell containing the expression vector of claim 6.

10. *(original)* The recombinant host cell of claim 9, wherein said nucleic acid molecule has a nucleotide sequence selected from a group consisting of: (SEQ.ID.NO.:1); (SEQ.ID.NO.:8); and functional derivatives thereof.

11. *(original)* The recombinant host cell of claim 9, wherein said cloned nucleic acid molecule is genomic DNA.

12. *(currently amended)* A protein, in substantially pure form having protease D-G proteolytic activity.

13. *(original)* The protein according to claim 12, having an amino acid sequence selected from a group consisting of: (SEQ.ID.NO.:2), (SEQ.ID.NO.:9) and functional derivatives thereof.

14. *(original)* A monospecific antibody immunologically reactive with protease D-G protein.

15. (*original*) A process for expression of protease D-G protein in a recombinant host cell, comprising:

- (a) transferring the expression vector of Claim 6 into suitable host cells; and
- (b) culturing the host cells of step (a) under conditions which allow expression of the protease D-G protein from the expression vector.

16. (*canceled*)

17. (*canceled*)

18. (*canceled*)

19. (*canceled*)

20. (*canceled*)

21. (*canceled*)

22. (*canceled*)

23. (*canceled*)